

REMARKS

Claims 1-21 are all the claims pending in the application. Claims 7-11 and 16-19 stand withdrawn.

Allowable Subject Matter

The Examiner indicates that claim 21 contains allowable subject matter and would be allowed if rewritten into independent form including the limitations of the claims from which it depends. Applicant respectfully requests that the rewriting of claim 21 be held in abeyance at this time.

Claim Rejections

Claims 1-6, 12-15, and 20 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Watanabe (U.S. Patent No. 6,823,083), in view of Kim (U.S. Patent No. 6,078,686). Applicant respectfully traverses this maintained rejection.

Independent claims 1 and 12 are amended for purposes of clarity.

According to the present invention, a target pixel is defined by a physical location in an x(main scanning direction) –y(sub-scanning direction) plane of a display screen. The claimed predetermined pixels surrounding the target pixel are a set number of pixels in a physical region in the x-y plane surrounding the target pixel on a display screen. The input RGB color image signals and the luminance signals and chromaticity signals determined from the RGB color signals are defined for each pixel in the x-y plane of a display screen.

The adjustment of a luminance signal aids in sharpness correction. It is a process of emphasizing an outline of a letter and line to enhance contrast. The taking of the average of the

target pixel and the predetermined pixels aids in the proper calculation of the correct luminance signal.

For example, in an image comprised of halftone dots, such as a newspaper or magazine photograph, certain sized dots are regularly placed to form the image. When the image is viewed locally on the pixel level, a single dot only may be seen. However, there are actually a number of dots. Therefore, if a luminosity level is based only on a single pixel, there is deterioration in the image date. Therefore, it is important that the average luminance signal be based on a target pixel and surrounding pixels, as claimed.

Moreover, determining a correction value for the luminance according to a level of saturation value of a pixel aids in solving problems such as turbidity and lack of sharpness.

On the other hand, Kim teaches that color signals (e.g. color signals U and V) are adjusted based on an adjusted luminance signal, such that an input color signal is mapped from an original luminance plane to an adjusted luminance plane in an RGB space (as opposed to a physical x-y space, as in the present invention), as illustrated in Figure 10. The Examiner alleges that Kim does involve an analysis of a target pixel in a physical space. However, contrary to this assertion, Kim fails to teach or suggest an analysis of a target pixel in a physical x-y space, rather the analysis of the target is in an RGB space, as illustrated in Figure 10.

Kim calculates an average of deviation in order to detect impulse noise within a window in the i-j (RGB) space. If impulse noise is detected, the correction value is calculated based on complicated processing. However, Kim fails to teach or suggest that a luminance signal is changed according to a level of saturation, as claimed in the present invention.

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Therefore, in view of the above, Applicant submits that claims 1-6, 12-15, and 20 are patentable over the cited combination of references and respectfully requests that the rejection of these claims be reconsidered and withdrawn.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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